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Patent
Attorney Docket No. 034279-010

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

Philip Russell et al.

Application No.: 10/550,095

Filing Date: September 21, 2005

Title: PHOTONIC BANDGAP OPTICAL WAVEGUIDE WITH ANTI-RESONANT CORE BOUNDARY

Group Art Unit:

Examiner:

Confirmation No.:

**FIRST
INFORMATION DISCLOSURE STATEMENT
TRANSMITTAL LETTER**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Enclosed is a FIRST Information Disclosure Statement and accompanying form PTO-1449 for the above-identified patent application.

- ☒ No additional fee for submission of an IDS is required.
- ☐ The fee of \$180.00 (1806) as set forth in 37 C.F.R. § 1.17(p) is also enclosed.
- ☐ A statement under 37 C.F.R. § 1.97(e) is also enclosed.
- ☐ A statement under 37 C.F.R. § 1.97(e), and the fee of \$180.00 (1806) as set forth in 37 C.F.R. § 1.17(p) are also enclosed.
- ☐ Charge _____ to Deposit Account No. 02-4800 for the fee due.
- ☐ A check in the amount of _____ is enclosed for the fee due.
- ☐ Charge _____ to credit card. Form PTO-2038 is attached.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§ 1.16, 1.17 and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 02-4800. This paper is submitted in duplicate.

Respectfully submitted,

BUCHANAN INGERSOLL PC

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By William C. Rowland

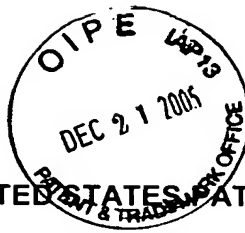
William C. Rowland
Registration No. 30,888

Date: December 21, 2005

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ATTORNEYS

Including attorneys from Burns Doane Swecker & Mathis

(8/05)



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FIRST INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure as set forth in 37 C.F.R. § 1.56, the accompanying information is being submitted in accordance with 37 C.F.R. §§ 1.97 and 1.98.

Pursuant to 37 C.F.R. § 1.98, a copy of each of the documents cited is enclosed.

The documents are being submitted within three (3) months of the filing or entry of the national stage of this application or before the first Office Action on the merits, whichever is later. Since these documents are being filed within the time period set forth in 37 C.F.R. § 1.97(b), no fee or statement is required.

To assist the Examiner, the documents are listed on the attached form PTO-1449. It is respectfully requested that an Examiner initialed copy of this form be returned to the undersigned.

Respectfully submitted,

BUCHANAN INGERSOLL PC

Date December 21, 2005

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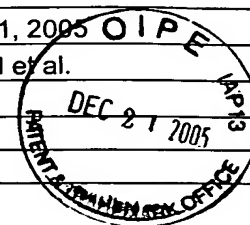
FIRST INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

Complete if Known

Application Number 10/550,095
 Filing Date September 21, 2005
 First Named Inventor Philip Russell et al.
 Examiner Name
 Attorney Docket Number 034279-010

**U.S. PATENT DOCUMENTS**

Examiner Initials	Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Issue/Publication Date (MM-DD-YYYY)
	2002/0136516	A1	Douglas C. Allan	09-26-2002
	6,444,133	B1	James C. Fajardo	09-03-2002

FOREIGN PATENT DOCUMENTS

Examiner Initials	Document Number	Kind Code (if known)	Country	Date of Publication (MM-DD-YYYY)	STATUS						
					Translation	Partial Translation	Eng. Lang. Summary	Search Report	IPER	Abstract	Cited in Spec
	*02/088801	A2	WO	11-07-2002				X			
	*02/41050	A2	WO	05-23-2002				X			
	*99/64903	A1	WO	12-16-1999				X			
	*02/075392	A2	WO	09-26-2002							X
	*99/64904	A1	WO	12-16-1999							X
	*00/60388	A1	WO	10-12-2000							X
	*00/22466	A1	WO	04-20-2000							X
	*02/084347	A1	WO	10-24-2002							X

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	*LITCHINITSER N.M. et al., "Antiresonant reflecting photonic crystal optical waveguides," <i>Optics Letters</i> , September 15, 2002, pp. 1592-1594, p. 1594, Vol. 27, No. 18, Optical Society of America
	*WHITE, T.P. et al., "Resonance and scattering in microstructured optical fibers," <i>Optics Letters</i> , November 15, 2002, pp. 1977-1979, Vol. 27, No. 22, Optical Society of America
	*BIRKS, T.A. et al., "Full 2-D photonic bandgaps in silica/air structures," <i>Electronics Letters</i> , 26 October 1995, pp. 1941-1943, Vol. 31, No. 22
	*BROENG, Jes et al., "Analysis of air-guiding photonic bandgap fibers," <i>Optics Letters</i> , January 15, 2000, pp. 96-98, Vol. 25, No. 2
	*ALLAN, Douglas C. et al., "Photonic Crystal Fibers: Effective-Index and Band-Gap Guidance," <i>Proceedings of the NATO Advanced Study Institute on Photonic Crystals and Light Localization</i> , Photonic Crystal and Light Localization in the 21st Century, 2001, C.M. Soukoulis (ed.), Kluwer Academic Publishers
	*JOANNOPOULOS, John D. et al., "Photonic Crystals: Molding the Flow of Light," pp. 127-129, ISBN 0-691-03744, Princeton University Press
	*VENKATARAMAN, N. et al., "Low Loss (13dB) Air Core Photonic Bandgap Fibre," Post-deadline paper, ECOC 2002.
	*MANGAN, B.J. et al., "Low loss (1.7 dB/km) hollow core photonic bandgap fiber," Post-deadline paper, OFC 2004
	*SMITH, Charlene M. et al., "Low-loss hollow-core silica/air photonic bandgap fibre," <i>Nature</i> , pp. 657-659, 7 August 2003, Vol. 424
	*MÜLLER, Dirk et al., "Measurement of Photonic Band-gap Fiber Transmission from 1.0 to 3.0 µm and Impact of Surface Mode Coupling," <i>Proc. CLEO</i> , 2003
	*International Search Report for PCT/GB2004/001251, dated July 8, 2004

*Copy attached.

Examiner Signature	Date Considered
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.